Matlab Codes for "Linear Quadratic Approximation of Rationally Inattentive Control Problems"

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Abstract

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1 Toolbox Programs

- LQG.m: This code computes the LQ control solution.

- RI_SS_FOC.m: This code computes the steady-state rational inattention solution based on the first-order conditions.

- RI_SIG.m: This code computes the signal structure.

- RI_IRF3.m: This code computes the IRF and second moments.

- anal_derivative.m: This code computes analytical first and second derivatives.

- num_derivative.m: This code evaluates the first and second derivatives.

2 User Supplied Programs

A user needs to provide three Matlab code files to apply the toolbox. For example, the file filename_Run.m is the main code to run first, which calls two subroutines. The code filename_model.m specifies the model structure. The code filename_model_ss.m provides the steady-state solution.

For the examples in Section 5.1, the codes are Pitfall_Run.m, Pitfall_model.m, and Pitfall_model_ss.m. The file Pitfall.mod is the Dynare code to compute the linearized solution. The code ConsPitfall.m computes the solution using the ad hoc LQ approximation method.

For the examples in Section 5.2, the codes are RBCPref_Run.m, RBCPref_model.m, and RBCPref_model_ss.m.

For the examples in Section 5.3, the codes are RBCIST_Run.m, RBCIST_model.m, and RBCIST_model_ss.m.

For the examples in Section 5.4, the codes are RBCNews_Run.m, RBCNews_model.m, and RBCNews_model_ss.m.

For the examples in Section 5.5, the codes are Durable_Run.m, Durable_model.m, and Durable_model_ss.m.